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Design of a Web-Based Information System for Battuta University Alumni Data Collection

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ABSTRACT

The role of alumni data in supporting institutional development and fostering stronger connections between alumni and their alma mater is significant. Battuta University currently lacks an efficient system for collecting and managing alumni data, which has led to a gap in communication and potential missed opportunities for collaboration. This study aims to design a web-based information system tailored for the systematic collection, management, and utilization of alumni data. Using the System Development Life Cycle (SDLC) methodology, this research outlines each stage of system development, from requirements analysis to deployment. The proposed system features a user-friendly interface, secure data storage, and versatile data retrieval options, allowing administrators to update, manage, and access information effectively. The implementation of this system is expected to facilitate a more structured approach to alumni engagement, enhance communication between the university and its graduates, and support data-driven decision-making processes. This web-based solution is projected to improve the efficiency and reliability of alumni data management, contributing to the university's strategic goals.

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1. INTRODUCTION

As a relatively new private university, Battuta University has proven its true role as an educator of human life. Although its alumni are still few due to the young age of the university, they have begun to spread in various regions. Alumni are an integral part of the university's academic community [1]. The presence of alumni is currently part of the accreditation assessment of educational institutions, because with good information about former students, it can indirectly improve the good image of the university in the eyes of the community and can also activate information systems for various additional purposes such as alumni monitoring, job offers, seminars, and other information [2].

The web-based alumni information system at Battuta University can be used as a forum or media for alumni, students, lecturers, and universities to communicate indirectly. So it is hoped that the existence of this container can be useful for users who use it [3]. Battuta University still collects alumni data manually, specifically by filling out questionnaires [4].

Filling in the data on this questionnaire is done when the alumni will legalize the diploma. This allows for errors in writing data on the questionnaire, does not facilitate the process of searching for alumni data, and the backed-up data is less secure, so the possibility of losing the data is greater [5]. The results of this study can be a reference for the development of information technology and add to the study [6].

Practically, this research can be an alternative way to manage data and information on alumni ties so

that it can facilitate its management effectively and efficiently. This research aims to design and build a web-based information system for the data collection of Battuta University alumni [7].

2. METHOD

Looking at the background and objectives, this research uses a research and development (R&D) approach. Research and development is a process or steps to develop a new product or improve existing products, which can be accounted for. The research and development method (Research and Development) is a research method used to produce certain products and test the effectiveness of these products [8].

Thus, development is more directed at efforts to produce products that are ready for real use in the field, not just finding knowledge or testing certain hypotheses or theories. The research and development carried out is focused on creating information system software for managing alumni data at Battuta University [9].

This research uses Agile Software Development for the development process. The application model design approach is done with a unified modeling language. The application functionality is described through use case diagrams as the initial system design and initial development design [10]. The Agile method was chosen to design this research system because it supports system development principles that focus on rapid development, gradual release, and direct user involvement. Testing is done with a black box testing approach to ensure that the application functions properly and produces input and output as expected [11].

The purpose of this test is to ensure that the desired results are in accordance with design. After testing, an evaluation of the application is carried out by assessing aspects of design quality, information organization, clarity of application navigation, application usability, and ease of use of the application [12].

3. RESULTS AND DISCUSSION

Implementation is the realization of the design and design that has been done before. This application is built using PHP as the programming language. By utilizing this technology, this application can be run on a web browser.

Implementation of the interface of the software is done based on the design that has been done. The implementation is shown from screenshots of the web pages used as tools and research materials that have been detailed in the previous chapter.

3.1. Main Page

On the main page of the web, it will display a list page to be able to use the web, or if you are already registered, you can go through the web on the login view to enter the next view.

3.2. Login Page

The login menu in this application is where the admin first enters the correct email address and password. If you have not registered, you can register on the register now page.

3.3. Register Page

The registration page is an application design that has a submenu of name, email address, password, and password confirmation; after that, click approve and register now.

3.4. Admin Page

The admin page is an application design that has a dashboard, class data, management, identity, and account submenu.

3.5. Batch Data Page

The Batch Data page is a data page that contains submenu information about the graduating class year and the amount of data**.**

3.6. Job Fair Page

The menu display of the job exchange page contains a submenu for adding vacancies, which contains the name of the business entity, job title, description, end of vacancy, posting date, and displayed.

3.7. Event Page

The event page menu display has an add event submenu containing thumbnails and events.

3.8. User's Personal Data Page

The user data page menu display has a personal data submenu, namely name, email address, study program, and gender. The appearance of the program is as follows:

Figure 3.1. Main Page

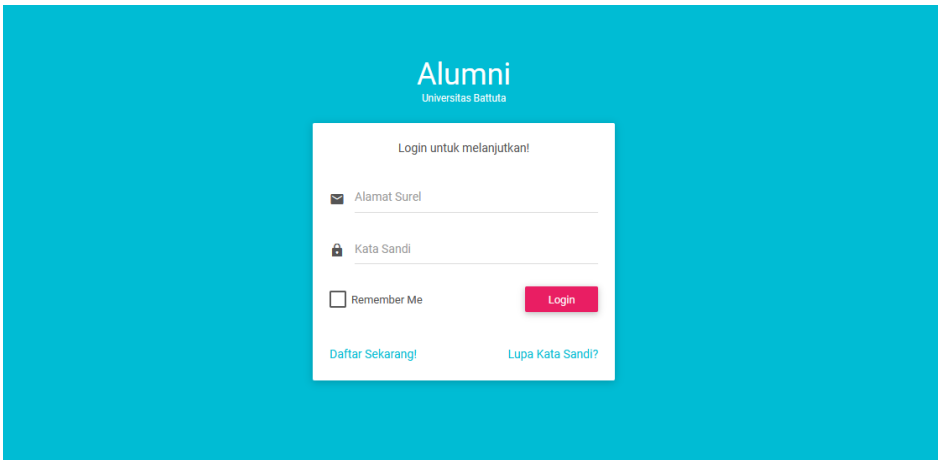

Figure 3.2. Login Page

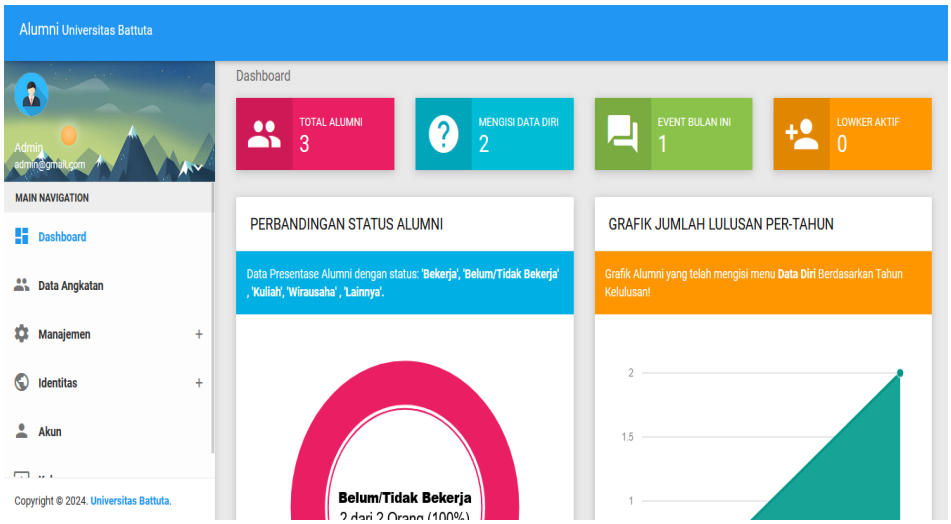

Figure 3.3. Register Page

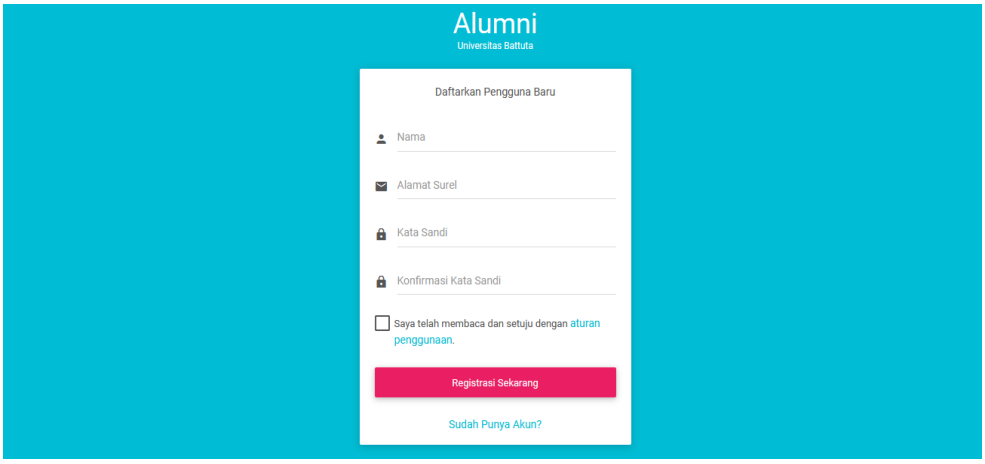

Figure 3.4. Admin Page

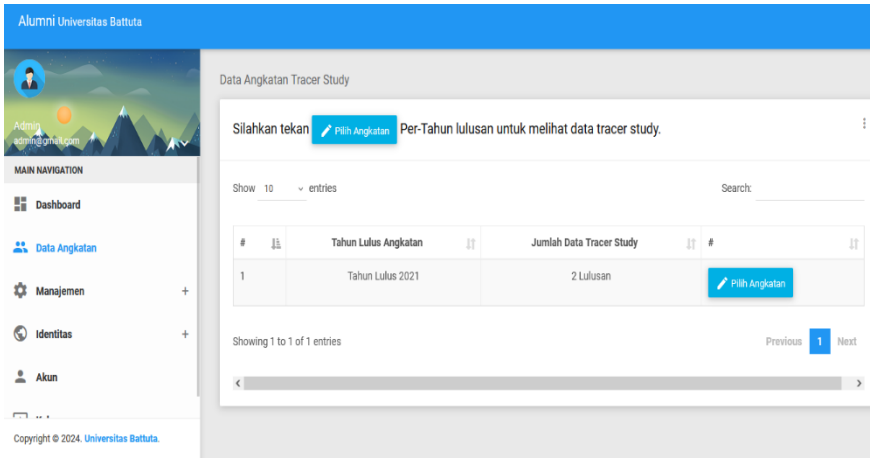

Figure 3.5. Batch Data Page

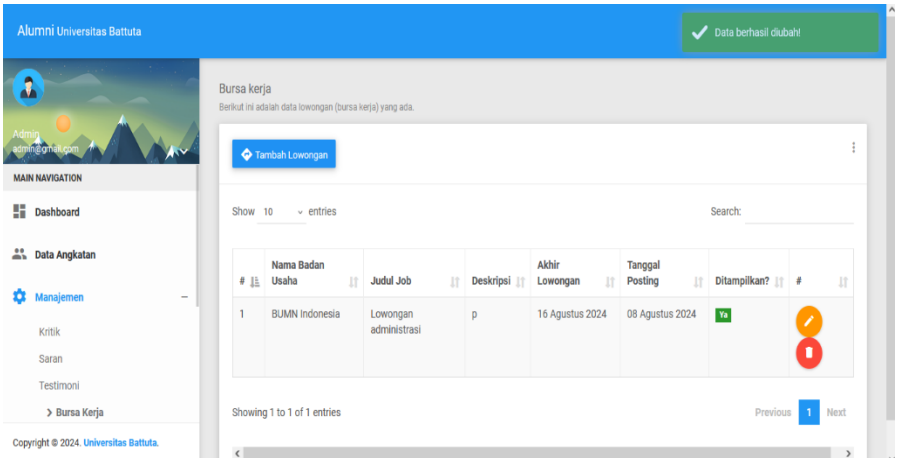

Figure 3.6. Job Fair Page

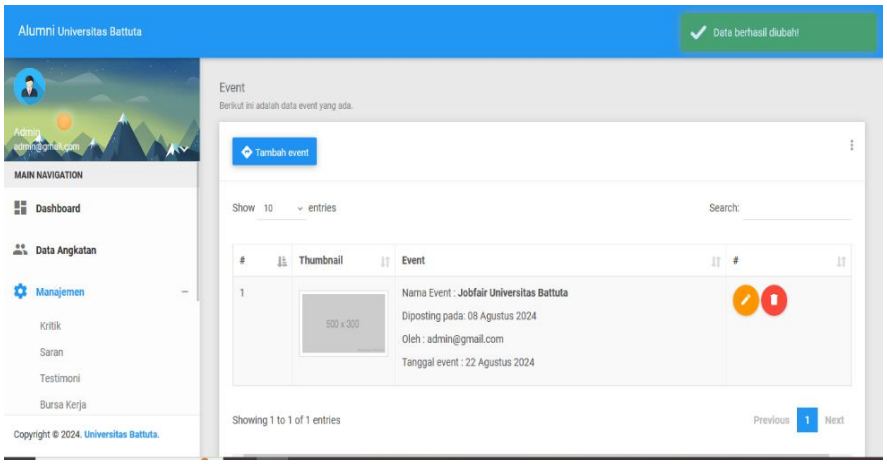

Figure 3.7. Event Page

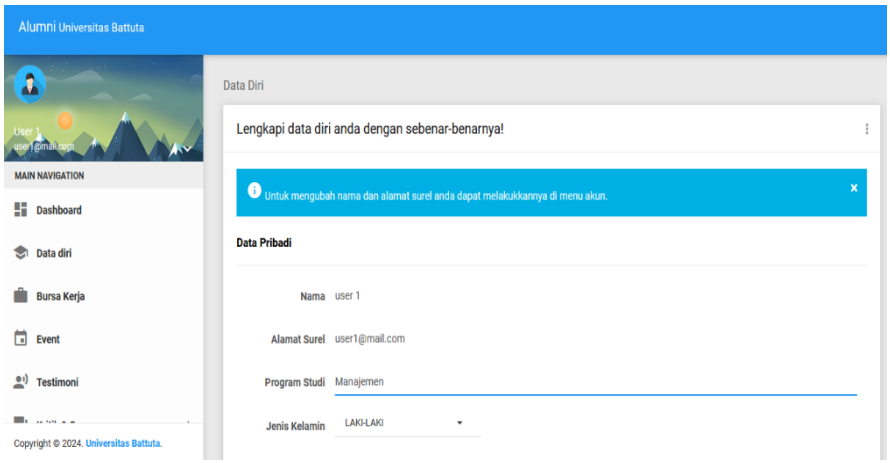

Figure 3.8. User's Personal Data Page

4. CONCLUSION

From the discussion that has been described in the previous chapters, it can be concluded that:
1.The application is designed using the PHP programming language and MySQL database.
2.A web-based alumni system can improve alumni data processing at Battuta University, where data storage is computerized so that various obstacles such as lost data or scattered data can be avoided. This web-based alumni information system provides a means of information about alumni data. In addition, the university can find out more information about its alumni.
3.With this alumni website application, alumni data is stored properly in the system database so that it is safer and searching for alumni data becomes more efficient. System development using a website causes the process of developing and maintaining the system to be easier and more structured.

REFERENCES

[1] Amra, T. H. M. (2018). *Rancang Bangun Sistem Pengelolaan Data Alumni pada Ikatan Kekeluargaan Alumni (IKA) SMA Negeri 1 Bulukumba*. UIN Alauddin Makassar.

[2] Banyal, N. A., Angriani, L., & Surianti, S. (2021). Aplikasi Rancang Bangun Sistem Informasi Alumni Perguruan Tinggi Di Kota Jayapura Berbasis Web (Studi Kasus Stmik Umel Mandiri). *Jurnal Ilmiah Matrik*, *23*(1), 94–99. https://doi.org/10.33557/jurnalmatrik.v23i1.1215

[3] Dewi, R., & Sundari, J. (2021). Sistem Informasi Pengelolaan Data Alumni Berbasis Web Pada SMK Bina Mandiri 2 Sukabumi. *Jitu*, 25–30.

[4] Dharmalau, A., Nurlaela, L., & Hartono, M. (2020). Perancangan Sistem Informasi Paguyuban Alumni Stmik Swadharma Berbasis Web. *Energy for Sustainable Development: Demand, Supply, Conversion and Management*, *2*(4), 1–14.

[5] Farisi, A. (2021). Rancang Bangun Aplikasi Pendataan Alumni SMA Negeri 6 Palembang Menggunakan CodeIgniter. *JATISI (Jurnal Teknik Informatika Dan Sistem Informasi)*, *8*(4), 2131–2143. https://doi.org/10.35957/jatisi.v8i4.1642

[6] Kusdinar, D. A., & Isnainiyah, I. N. (2021). Perancangan Sistem Informasi Pendataan Alumni Berbasis Web (Studi Kasus : SDI Assalam). *Jurnal SENAMIKA*, *2*(September), 624–634.

[7] Madhani, E. I., Wicaksono, S. A., & Amalia, F. (2022). Pengembangan Sistem Informasi Pendataan Alumni berbasis Web pada SMA Negeri 3 Pontianak. *Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer*, *6*(4), 1940–1950.

[8] Naufal, M. R. (2020). *Rancang Bangun Aplikasi Pendataan Alumni STMIK Indonesia Banda Aceh*. *2*(1), 11–21.

[9] Nugraha, W. A., Kurniawan, R., & Suwartika, R. (2021). Rancang Bangun Sistem Informasi Alumni Berbasis Web bagi Sekolah Madrasah Aliyah. *Jutisi : Jurnal Ilmiah Teknik Informatika Dan Sistem Informasi*, *10*(3), 505. https://doi.org/10.35889/jutisi.v10i3.717

[10] Situmorang, H. (2021). Sistem Informasi Pengelolahan Data Alumni Berbasis Web (Studi Pada Fakultas Sain, Teknologi Dan Informasi) Universitas Sari Mutiara Indonesia. *Jurnal Mahajana Informasi*, *4*(1), 34–48.

[11] Wahyuni, W. S., Wagino, W., & Agustini, D. (2023). Aplikasi Pendataan Alumni Dan Pelayanan Legalisir Online Pada Sma Negeri 1 Bati-Bati Kab. Tanah Laut Berbasis Web. *Jurnal Sains Sistem Informasi*, *1*(1), 33. https://doi.org/10.31602/jssi.v1i1.9675

[12] Barat, S., Putra, F. K., Agustina, Y., Islam, E. B., Syariah, P., & Islam, E. B. (2021). Aplikasi Tracer Study Alumni IAIN Batusangkar Berbasis Web. In JAMIK: Jurnal Aplikasi Manajemen … (Vol. 1,